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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/537,007	05/26/2005	Eric Grech	10404.022.00-US	1292

7590 09/14/2007  
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Washington, DC 20006-1108

EXAMINER
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MCCLENDON, SANZA L

ART UNIT	PAPER NUMBER
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1711

MAIL DATE	DELIVERY MODE
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09/14/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

Application No.

10/537,007

Applicant(s)

GRECH ET AL.

Examiner

Sanza L. McClendon

Art Unit

1711

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 26 May 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 29-56 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 29-32, 34, 36-41 and 50-56 is/are rejected.
- 7) ☒ Claim(s) 33, 35 and 42-49 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☒ None of:
- 1) ☒ Certified copies of the priority documents have been received.
  - 2) ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 5/05.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_.

DETAILED ACTION

*Claim Rejections - 35 USC § 102/35 USC § 103*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 29-32, 34, 36-41, and 50-54 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Zhang et al (6,387,981).

Zhang et al teaches radiopaque dental materials with nano-sized particles, which can be used in dental prosthesis-see title and column 1, line 8. In column 37, lines 9-16 Zhang et al sets forth a resin composition comprising the following.

<u>Resin C</u>	
bisGMA	24.18
UDMA	33.85
bisEMA6	33.85
TEGDMA	4.84
CPQ	0.2
DPIHFP	0.5
EDMAB	1.0
BHT	0.1
Norbloc 7966	1.5

wherein, per table 1 Zhang et al sets forth mixing the above composition with fillers A and B, which are the fillers, silica and zirconium, respectively. Zhang et al sets forth the use of zirconium fillers having particle diameters of less than 100 nm (0.1  $\mu$ m). This appears to anticipate applicant compositions of claims 29-32, 34, 40-41, and 50; since, claim 29 has open language it does not exclude the use of other fillers, such as silicone containing fillers. Additionally, Zhang et al sets forth the use of other non-silicone type fillers, such as aluminum oxide, titanium oxide, and the like—see column 5, lines 17-20. Accordingly, the usage of non-silicone fillers having particle sizes within the claimed ranges is envisioned within the reference. Per examples 4 and 5, Zhang et al sets forth the use of fillers zirconium (example 4) and tin (example 5) using resin compositions A and B, however it would have been obvious to a skilled artisan to use resin composition C in place of resin compositions A or B from the teachings of the overall reference. Zhang et al sets forth the use of other photoinitiators, such as tri acylphosphine oxides, such as bis (2,4,6-trimethylbenzoyl) phenyl phosphine oxide and alpha ketones, such as benzophenone and camphorquinone, along with the use of amino benzoates and other amine sensitizer compounds—see column 17-19. Any dental prosthesis obtained from compositions according to the reference anticipates claims 52-54. Regarding claims 55-56, it appears the processes are nominal processes, therefore any ordinarily skilled artisan in the art using the reference at the time of the invention would have found it obvious to use the resin compositions of Zhang et al with an expectation of obtaining the success as described in the reference in the absence of evidence to the contrary in the same manner.

#### *Allowable Subject Matter*

4. Claims 33, 35 and 42-49 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

5. The following is a statement of reasons for the indication of allowable subject matter: The limitation of the above indicated claims were not disclosed in a photocurable composition comprising as essential components those found in claim 1.


#### *Conclusion*

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sanza L. McClendon whose telephone

number is (571) 272-1074. The examiner can normally be reached on Monday through Friday 7:30-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Seidleck can be reached on (571) 272-1078. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

  
Sanza L. McClendon

Examiner

Art Unit 1711

SMC